REMARKS

Reconsideration of the above-identified application in view of the present amendment is respectfully requested. By the present amendment, claims 1 and 5 have been amended to include the limitation that the gas generating material is free of an energetic plasticizer. Support for this limitation can be found on page 4, lines 17-18, which state the single-base composition does not include an energetic plasticizer and page 8, which states that the gas generating material can include additional ingredients, none of which is described as being an energetic plasticizer, and an oxidizer.

Claim 2 was also amended to better define the group of compounds listed in claim 2.

Claims 6, 7, and 8 were also added to the application. Claim 6 further restricts the ingredients of the single-base composition of claim 5 by reciting that the single-base composition of claim 5 consists essentially of nitrocellulose, a urea of an aromatic amine, and less than about 5% by weight of a non-energetic plasticizer. Claim 7 includes limitations similar to claim 2. Claim 8 contains limitations similar to claim 1 but restricts the gas generating material to consisting essentially of the single base composition.

Below is a discussion of the 35 U.S.C. §103(a) rejection of claims 1-5.

35 U.S.C. §103(a) Rejection

Claims 1-5 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 3,895,821 to Schotthoefer et al., Meyer: Handbook of Explosives, U.S. Patent No. 4,082,583 to Mosher, and U.S. Patent No. 3,890,175 to Lavitt.

Claim 1 recites an apparatus comprising a vehicle occupant protection device and a gas generating material. The gas generating material upon combustion produces a gas product that actuates the vehicle occupant protection device. The gas generating material comprises a single-base composition that includes greater than 2%, by weight of the single-base composition, stabilizer. The stabilizer is a urea of an aromatic amine. The gas generating material is free of an energetic plasticizer.

Claim 1 is patentable over Schotthoefer et al., Meyer, Mosher, and Lavitt because Schotthoefer in view of Meyer, Mosher, and Lavitt do not a teach a gas generating material that can be used to actuate a vehicle occupant protection device, which includes greater than 2% by weight of the single base composition a stabilizer, which is a urea of an aromatic amine and a gas generating material that is free of an energetic plasticizer.

As discussed in item 2 of the Office Action, Schotthoefer et al. teach an air bag apparatus that includes a single-base propellant, such as nitrocellulose. Schotthoefer et al., however, do not teach that the single-base propellant

further includes a stabilizer in addition to the nitrocellulose, that the stabilizer is a urea of an aromatic amine, and that the stabilizer is used in an amount of greater that 2% by weight of the single-base propellant.

Meyer teaches that a single-base powder can consist of nitrocellulose and stabilizers. Meyer further teaches that stabilizers can include diphenylurea, methyldiphenylurea, and sym-diethyldiphenylurea. Meyer, however, does not teach the weight % of stabilizer that is used with the nitrocellulose or that a combination of nitrocellulose and a stabilizer can be used as a single-base composition in a gas generating material for actuating a vehicle occupant protection device.

Mosher teach double-base propellants that include nitrocellulose and an energetic plasticizer. The double-base propellants used in Mosher can include 0.5 to 5% of a stabilizer, with about 1 to about 2 percent of stabilizer being preferred.

Mosher do not teach nor is it suggested that this 0.5 to 5.0% stabilizer range is applicable to single-base propellants. The only discussion of single-base propellants disclosed in Mosher is at column 5, lines 17-23. Here, Mosher teaches that NACO, a notoriously well known single-base propellant, includes only 1 weight percent ethyl centralite. Thus, there is nothing in Mosher that would teach the addition of more than 1% by weight stabilizer to a single-base propellant.

Moreover, Mosher teaches the use of lead base compounds, such as lead resorcylate and basic lead carbonate in the double-base propellants and single-base propellant. (See column 3, lines 30-33, Table 1, Table 3, and column 5, lines 17-20.). Lead base compounds produce combustion products, which render them unsuitable for use in gas generating materials for automotive applications. Thus, one skilled in the art would have no motivation or suggestion to use the single base propellant and double base propellants taught in Mosher. Additionally, it is impermissible hindsight to select the amount of stabilizer taught in Mosher while excluding the other ingredients taught for the single-base and double base propellants of Mosher because one cannot "pick and choose among isolated disclosures in the prior art to deprecate the claimed invention". In re Fine, 837 F.2d 1071, 5 USPQ 2d 1596 (Fed. Cir. 1988).

Lavitt, like Mosher, teach double base propellants that include 0.5-5.0% by weight of a stabilizer. Lavitt does not teach a single-base composition or the amount of stabilizer used in the single-base composition. Thus, there is no motivation or suggestion in Lavitt to use 0.5-5.0% stabilizer in the single-base composition of Schotthoefer et al. or Meyer.

Additionally, Lavitt, like Meyer, teach using a lead base compound in the double-base propellant. Lead base compounds are unsuitable for use in gas generating materials for automotive applications. Thus, one skilled art would have no

motivation or suggestion to use the double base propellants taught in Lavitt.

Thus, although Schotthoefer et al. teach the use of a single-base propellant for a gas generating material of an air bag and Meyer teach that a stabilizer can be used with nitrocellulose in a single-base powder, there is no suggestion in the prior art (i.e., Mosher and Lavitt) that the amount of stabilizer be used in an amount greater than 2% by weight for a single-base composition. Mosher only teaches using 1% by weight of a stabilizer for a single-base propellant. Therefore, withdrawal of the rejection of claim 1 is respectfully requested.

Claim 2-4 depend either directly or indirectly from claim 1 and therefore should be allowed in view of the aforementioned deficiencies of the rejection discussed with respect to claim 1.

Claim 5 contains limitations similar to claim 1 and should therefore be allowed in view of the aforementioned deficiencies discussed with respect to the rejection of claim 1.

Claims 6 and 7 depend directly from claim 5 and therefore should be allowed in view of the aforementioned deficiencies of the rejection discussed with respect to claim 1.

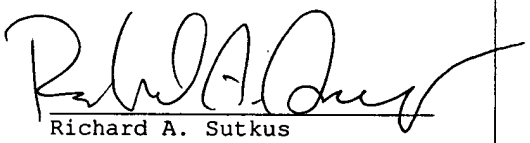
Claim 8 contains limitations similar to claim 5 and therefore should be allowed in view of the aforementioned deficiencies discussed with respect to the rejection of claim 1.

In view of the foregoing, it is respectfully submitted that the above-identified application is in condition for allowance, and allowance of the above-identified application is respectfully requested.

Attached hereto is a marked-up version of the changes made by the present amendment. The attached page is captioned "**AMENDED CLAIMS WITH MARKINGS**."

Please charge any deficiencies or credit any overpayment in the fees for this amendment to our Deposit Account No. 20-0090.

Respectfully submitted,



Richard A. Sutkus
Reg. No. 43,941

TAROLLI, SUNDHEIM, COVELL,
TUMMINO & SZABO L.L.P.
1111 Leader Building
526 Superior Avenue
Cleveland, Ohio 44114-1400
Phone: (216) 621-2234
Fax: (216) 621-4072

AMENDED CLAIMS WITH MARKINGS

Claim 1 has been amended as follows:

1. (Amended) An apparatus comprising;

a vehicle occupant protection device; and

a gas generating material, which upon combustion produces a gas product that actuates said vehicle occupant protection device; said gas generating material comprising a single-base composition that includes greater than 2%, by weight of the single-base composition, stabilizer, wherein said stabilizer is a urea of an aromatic amine, said gas generating material being free of an energetic plasticizer.

Claim 2 has been amended as follows:

2. (Amended) The apparatus of claim 1 wherein the urea of the aromatic amine is selected from the group consisting of ethyl centralite, 1,1-diphenylurea, 1,1-diphenyl-3-methyl-urea, and mixtures thereof.

Claim 5 has been amended as follows:

5. (Amended) An apparatus comprising;

a vehicle occupant protection device and a gas generating material, which upon combustion produces a gas product that actuates the vehicle occupant protection device, the gas generating material comprising a single-base composition and being free of an energetic plasticizer;

about 90 to about 95% by weight of the single-base composition being nitrocellulose,

about 3% to about 5% by weight of the single-base composition being a urea of an aromatic amine, and

less than about 5% by weight of the single-base composition being a non-energetic plasticizer.

Claims 6-8 have been added.